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Review Article

Indigenous Environmental Resilience: Decoding Ancient Rozvi Wisdom on Mountain Ecosystems as Disaster Management Solutions

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Abstract

Since time immemorial, Indigenous communities have always perceived the landscape as a complex web of living, physical, and spiritual things. These communities have always relied on their Indigenous knowledge systems (IKS), emphasizing ancestral burial grounds, mountains, caves, rivers, pools, forests, monuments, and other cultural diacritics as symbols of place identity. In addition, myriad metaphors like taboos, legends, tales, folklore, myths, proverbs, stories, and practices, also constituted an integral part of Indigenous cultural and nature connections. This heritage was constantly imagined and configured to cement human-nature relations. However, the advent of colonialism severely violated this status quo, thereby causing deep environmental, political, and social crises. Through imposing a hegemonic scientific paradigm, knowledge compartmentalization, and capitalist aggrandizing practices, the original harmonious human-nature praxis premised on IKS was disrupted. To this day, the exclusionary colonial legacy and poisoned 'sense of place' remains our greatest threat to climate and environmental stability. Thus, this paper advocates for the recentralization of IKS as a valid way of knowing with already inbuilt human and natural disaster management solutions. By pivoting Rozvi narratives premised on five mountains, namely; Manyanga in Bubi district, Mayangwe, MunwewaMwari and Bepe in Buhera district, and Mutikwiri in Maungwe near Rusape town, all situated in former Butua/Guruuswa regions of Zimbabwe as case studies, the power of ancient wisdom as a holistic epistemic approach towards sustainable human-nature relations is explicated.

Introduction

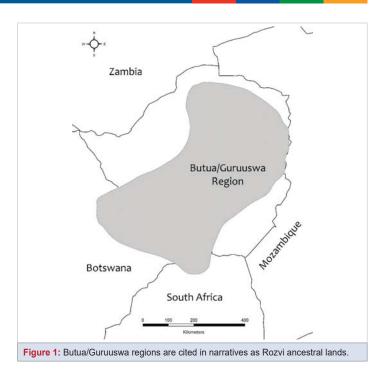
The rising global temperatures, warming oceans, melting northern Hemisphere snow cover, decreasing sea ice cover, rising seawater and ocean acidification levels, and myriad extreme weather conditions all attest to dramatic climate change patterns [1,2]. Implicitly, these environmental shifts negatively affect farming and hunting patterns, food and water availability, forest conservation, animal habitats and biodiversity, infrastructure development, human health, and life itself. Regrettably, the worst affected lives and livelihoods are those of the poor and marginalized communities with limited human and natural disaster response

capacities. Against this background, calls for concerted global action to counter climate change have been amplified, though the colonial legacy remains our biggest stumbling block [1,3,4]. Nonetheless, global discourses on climate change are crystalizing into two epistemological dichotomies, which, though different, weld great potential if integrated. Respectively, on one extreme end, is the futuristic Western 'modern' scientific and technological approach premised on strict statistical or numerical measurements, observations, and monitoring systems of the global environment [3-5]. On the other hand, Indigenous narratives are yearning to return to a pre-modern past as a strategy to enhance community self-determination against local climate change [5,6]. While the ISSN 2995-8067 DOI: 10.61927/igmin130

former epistemology places great emphasis on facts, objectivity, place-less-ness, and universality, the latter downplays a focus on facts in favor of a comprehensive appreciation of local languages, beliefs, meanings, values, and geographical contexts [4,7,8].

More so, while the scientific approach pays particular attention to the physical environmental realities for predictive modeling purposes, IKS tends to prioritize both the visible and invisible aspects of society and nature. Hence, this implies that IKS is premised on a conscious awareness of past, present, and future realities. Instead of respectfully engaging with both epistemological paradigms in attempts to find lasting solutions to climate change and associated impacts, scientists and policy-makers have tended to privilege their own worldview to their detriment [5]. IKS are not necessarily 'alternative knowledge' but critical knowledge at par with the Western academy, whose resilience transcends generations of balanced human-nature relations. Since traditional knowledge systems are naturally tied to the natural environment, they are already positively disposed towards ensuring human resilience mechanisms [2,6]. If truth be told, climate change and its associated impacts have largely been aggravated by the spread of colonial ideologies and capitalism, not Indigenous communities [7]. To make matters worse, Indigenous communities that have had very little to do with this rapid environmental damage continue to face marginalization at global climate change forums [1,9]. This regrettable state of affairs can only be meaningfully redressed by closely engaging with Indigenous people and focusing on understanding IKS as an equally valid community archive with immense potential to slow down climate change and reduce its impacts [2]. This paper attempts to do just that by adopting a decolonial paradigm towards revitalizing Indigenous knowledge for local community and global environmental benefit.

Therefore, the scheduled discussion begins by critically exploring the numerous biases inherent in the colonial library about Indigenous philosophies and worldviews. Colonial research and education were not only rude to Indigenous communities but disruptive, misinformed, and worthless to their socio-cultural practices and development [10-12]. Smith [12] further argues that from an Indigenous perspective, the word 'research' remains one of the dirtiest terms in their vocabulary. Under this colonial hegemonic framework, the scientist often behaved like a 'spectator' who observed, interviewed, and described Indigenous people with total disregard for their cultural meanings and values [3,13]. Often, these scientists imposed their own preconceived imaginations that contradicted Indigenous reality. Such colonial mischief towards IKS deserves outright condemnation, especially considering that Indigenous people had always relied on their knowledge systems for millennia to feed themselves and live in perfect harmony with nature [9]. With special reference to Rozvi narratives woven around their ancestral Butua/Guruuswa regions (Figure 1), five mountains including Manyanga in Bubi district, Mavangwe, MunwewaMwari and Bepe in Buhera district, and Mutikwiri in Maungwe near Rusape town, Zimbabwe; the power of ancient wisdom in maintaining human-nature relations is explored. Rozvi narratives are critiqued as parallel scientific tools that variably described, monitored, and documented the environment, and also regulated community behavior to safeguard the climate and avoid both human and natural disasters.



Colonial violence, geography and climate change

Before the advent of colonialism, the relationship between humankind and nature was in equilibrium. The secret behind this environmental stability lay in the original state of IKS. By advocating for sustained interconnectedness and balance between all aspects of life and creation, this knowledge ensured the endurance of community ties to the land, biodiversity, and cosmology. Such knowledge also guaranteed a sustainable vibrant relationship between people, their ecosystems, 'other beings', and spirits sharing the same lands [11,14]. As Cameron, et al. [7] elaborate, among Indigenous communities, the earth is always alive, imbued with spirit, and it forever remains a special borrowed gift from future generations. Owing to this intergenerational mentality and deep sense of environmental responsibility, about 370 million Indigenous people occupying 24% of the global land account for 80% of the world's biodiversity [9]. In view of this reality, it now suffices to also affirm that colonialism and capitalism deserve full condemnation as lead causes for climate change [2,4,6-8]. Indeed, colonialism severely disrupted Indigenous people's sense of identity, spirituality, and resilience premised on intimate nature, culture, and ecosystem interactions. Furthermore, in attempts to claim space and create 'new places' from usurped territories, imperial and colonial agents often blatantly denied, ignored, and erased all forms of Indigenous knowing and pre-existence [12].

Until today, the agents of colonialism stand accused of manufacturing enduring falsehoods like Indigenous people lacked landscape knowledge, memory, and connection. Thus, they dismissed and ignored Indigenous people's history as mere gossip [12,15-17]. More so, the historically colonized and marginalized were forced to reject their own culture and heritage in order to fully embrace Euro-western worldviews. In this respect, the colonial administration and its associates manipulated systems of education to condemn everything Indigenous while simultaneously reifying their own culture. This way, academia was weaponized

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to institutionalize, legitimize, and disseminate the hegemonic ideologies of colonialists [18]. As a common practice, Indigenous cultures were defined as inferior, backward, and barbaric, while their knowledge systems were compartmentalized and treated as unscientific, illogical, anti-developmental and ungodly [11,19] No doubt, the collective memory of imperialism sought to present Indigenous forms of knowing as localized, traditional, peasant, folk, irrational, backward, and obsolete knowledge [10,12,20]. Respectively, colonial forces not only succeeded in separating Indigenous people from each other but also in disconnecting them from their culture and nature relations, factors, which gradually degenerated into a deep environmental crisis. Of late, many are beginning to realize and accept the view that one of the greatest colonial atrocities that continues to haunt us is the separation of culture from nature.

Closely aligned to these colonial shenanigans was the entrenchment of superficial Western 'superiority' complexes through the development and usage of dubious classification systems, binary oppositions, and hierarchical ordering of knowledge systems [12,16,21]. Several scholars remain trapped in these colonial constructions and struggle to find a possible way out [5]. For instance, Shizha [10,11] informs us that all knowledge systems are scientific and started as Indigenous, but the dominant forces reified their own as more scientifically sophisticated.

Although academic discipline boundaries are good, sometimes they create unnecessary knowledge compartments and barriers that scholars and the public often struggle to navigate and reconcile. It, therefore, goes without saying that the Western academy remains elitist and way out of reach for the majority of Indigenous communities. Watson and Huntington [5] further hazards that the constant contrast of Western science with Indigenous knowledge is problematic because it perpetuates epistemic violence. For generations, these knowledge systems have had much in common through mutual knowledge exchange, but those who consider themselves intellectually superior barely acknowledge this reality [5,18,22,23]. On the flip side, the perceived 'great divide' between these knowledge systems continues to hinder research progress on climate change [3]. However, these artificial knowledge distinctions are best conceptualized as mere fallacies aimed at silencing the voices of Indigenous communities.

Colonialism has also been condemned for creating an environmental crisis through forced removals of people, separating them from each other, and their relations to culture and the natural world [7]. Yi [24] further states that colonialism exiled Indigenous people from their landscapes and radically transformed those spaces to nullify all forms of past imaginations. This was quite unfortunate because it disrupted Indigenous knowledge, which formed the basis of a holistic environmental conservation strategy and sustainable use of resources. A point that Relph [25] echoes by stipulating that pre-modern places had always rested in fine balance with nature because of Indigenous people's strong 'sense of place'. This sense of place extols whatever is 'old', or 'traditional' and decries anything 'new' [25]. Regrettably, the geographic violence of imperialism introduced a new worldview and values that severely undermined the already tried and tested Indigenous geographical identity [6,17,24]. Furthermore, the inception of a

new worldview meant the beginning of radical shifts in traditional ways of viewing ecosystems [6]. Even today, the colonial legacy continues to threaten the environment through extensive forest fires and clearances for commercial purposes, mineral exploitation, industrial production, and the alteration of hydrological cycles, among other challenges [2,4,7]. The dramatic impact of these factors on the environment continues to worsen, so humanity needs to respond urgently by imagining creative solutions. In line with this goal, this paper adopts a decolonial Indigenizing epistemological and methodological approach that centralizes narratives as the most powerful environmental management and protection tools.

Restoring the broken threads: An indigenous decolonial paradigm

As part of dispossessing Indigenous people, claiming their land, and assimilating them, imperialists launched a barrage of attacks on their backbone of survivance, namely knowledge systems [8,12]. Although colonial scholars largely misunderstood IKS, they still had the power to entrench epistemic violence against what they poorly knew [5]. In particular, these academics and many others alike assumed that Indigenous narratives literally communicated 'facts' about the physical world, yet they metaphorically expressed 'values and beliefs' through local languages [1,3,5,15]. Hershey, et al. [23] further add that the Indigenous body of knowledge is complex because it contrasts with the Western body of knowledge about what counts as reality, reliability, and results. For instance, Indigenous and Western ideas about space and time are contradictory. The former views these as relational and dynamic, meaning, narratives can be flattened, wrung out, and simplified [23,26]. In contrast, Western thought adopts a linear view of space and time, meaning these can be well-defined, organized, and fixed [12,15,23]. Perhaps the general failure to reconcile the two knowledge bodies owing to these fundamental differences resulted in the misplaced criticism of narratives as senseless, nativist discourse, naïve, contradictory, and illogical [11,12,19]. Against this background, narratives as part of IKS continue to be misjudged as meaningless and useless, a gross error that needs urgent redressing.

The quest to resist, reverse, reclaim, restore, and develop the once marginalized epistemologies and ontologies has crystalized under the banner of decolonization [14,18,20,22]. Hence, decolonization is a process of doing research in a manner that is respectful, sensitive, and highly beneficial to the Indigenous communities that have suffered prolonged colonial abuse, neglect, and oppression. Theoretically, such kinds of protest studies fall within what has been variably termed post-colonial, anti-colonial, post-modernist, deconstructionist research practices and Afrocentricity [14,26]. Under these emerging theoretical and methodological parameters, Indigenous knowledge is made central to knowledge production processes. Through such processes, our appreciation of what constitutes Indigenous knowledge and its associated nature and values has increased. In this respect, the word Indigenous means natural generational ties and a strong sense of identity within geographical localities [10,14]. As past generations interacted with their local environments, they gradually gained valuable environmental experience and information, which they, in turn, used daily, creatively packaged for every community member, and

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later passed on to future generations as cultural heritage. Thus, IKS can be broadly defined as intergenerational native ideas, beliefs, and practices relating to all aspects of life that are generally derived from a specific environmental context and passed on to others in various modes as cultural heritage [10,11,14,19].

An Indigenous worldview naturally promotes a community's self-determination and generational bond with surrounding environments [7,18,22]. In this respect, discourses of selfdetermination, sense of place, traditional ecological knowledge, and peoplehood all emphasize that colonial atrocities perpetuated against Indigenous people and their relations to nature can only be reversed by renewing or revitalizing Indigenous cultural ties to the land [1,4,7,8]. This follows the general realization that an Indigenous worldview is very good at melding history with geography and conflating place with group identity. Therefore, this knowledge system is rapidly reclaiming space within the Western academy as a decolonizing methodology, which empowers Indigenous communities to understand themselves through their assumptions and perspectives [18,22,26]. Along with such trends, Indigenous narratives, stories, naming patterns, poetry, music, art, dance, myths, tales, folklore, proverbs, taboos, idioms, legends, and cultural practices, among other modes of communication, are rapidly regaining space in research processes [19,23,24,27-29]. This is not merely coincidental or political, rather this follows the realization that narratives provide a deep insight into the intimate relationship and meaning(s) between humanity and nature [16,27,29]. Relph [30] neatly captures all this as follows:

Each place is a territory of significance, distinguished from larger or smaller areas by its name, its particular environmental qualities, the stories and shared memories connected to it, and the intensity of meanings people give to or derive from it.

Thus, contrary to colonial writings, IKS is neither fossilized in time nor static. Instead, they are very dynamic owing to internal and external knowledge influencing adaptational needs and the constant quest to resolve pressing community problems [10,31]. Most importantly, IKS is holistic because it acknowledges the interconnectedness of all living things, which range from person to person, humanity to nature, 'other beings' or the spirit world, and the broader universe [14,19,20]. As such, IKS constitutes a unique brand of flexible, fluid, and adaptive intergenerational wisdom that is constantly evolving through sustaining crucial relationships with the land and local people's histories [6]. Furthermore, Indigenous knowledge naturally promotes intergenerational thinking, ethics and values that keep the entire community fully engaged in caring for and protecting nature as an extension of their own identities [7]. The other key principle of relationality and stewardship is creatively embedded in narratives about 'living things' and spirituality, which cultivates a crucial sense of accountability and responsibility among the living to forgone ancestral spirits and future generations [6,7]. Palone [28] further echoes the power of Indigenous culture in environmental care and management in the following manner:

What we understand or believe about our environment has very real impacts on our use of resources and our valuation of functional ecological systems and ecosystem services. Given the views proffered, thus far, it is quite apparent that IKS constitutes the very heart of Indigenous people's lives and livelihoods, belief systems, and values as summed up in Table 1 below. The following section zeroes in on selected Rozvi narratives tied to five mountain ecosystems to illustrate ancient wisdom's power in ensuring sustainable human-nature relations.

Rozvi narratives, mountain ecosystems, and ancient wisdom

This section focuses explicitly on the Rozvi 1685-1830 a dynamic historical formation that dramatically rose to prominence in north-eastern Zimbabwe around the Mutapa state 1450-1900 before migrating south-westwards of the Zimbabwean plateau (Figure 2) to conquer the Torwa state 1400-1644 [32]. Although their political power was relatively short-lived, owing to Nguni's incessant attacks suffered between the 1820s and 1866, Rozvi identities had already been inscribed across extensive landscapes, which makes their past quite intriguing. The Rozvi past is revisited to illustrate the intimate relations between people, language, history, culture, and nature. By exploiting historical and cultural practices, the Rozvi systematically imbued their imagined identities on the land, thereby transforming it into a 'metaphorical historical textbook'. In particular, the land was gradually transformed into Rozvi landscapes through the creative manipulation of language,

Fable 1: Indigenous Knowledge Systems (IKS) as part of Ancient Rozvi wisdom.	
Advantages	Promote a community's self-determination and generational bond with the environment.
	Empower Indigenous people to understand local environments and themselves through their own assumptions and perspectives.
	Provide a deep insight into the intimate relationship and meaning(s) between humanity and nature.
	Promote Indigenous people's sense of place, identity, spirituality and resilience.
	Meld history with geography and conflate people with place identity.
	Provide a holistic environmental conservation strategy and sustainable use of local resources.
	Dynamic, adaptable, relevant, and valuable generationally acquired environmental knowledge and experience.
	Simplified, palatable, and creatively packaged knowledge that is accessible and useful to every community member on a daily basis.
	Specific or contextual environmental knowledge that exists in various modes as cultural heritage.
	Contain inbuilt intergenerational thinking, ethics, and values that are widely shared by the local community.
	Inherently posses the key principles of relationality and stewardship, which enforce individual and community accountability and responsibility.
Disadvantages	Treat space and time as relational and dynamic, hence they are often misjudged as meaningless and useless.
	Cannot be applied universally or globally because they are context-specific.
	Associated narratives and modes of communication are always metaphorical and too deep for community outsiders' comprehension.
	Barely centralized facts constituting the core of scientific reasoning, which makes it hard to integrate them with the Euro-American academy.
	Largely marginalized, hence barely understood and appreciated in strict scientific discourses.
	Becoming very difficult to reconstruct and access among outsiders because Indigenous people now mistrust researchers.

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